

A Year on Ice-Humbling and Character building experience!

Antarctica! The most hostile yet the breathtakingly beautiful landmass on the earth. It gives true feeling of vast dynamic forces of nature. Its haunting beauty is inspirational. It's a place in the world where you experience absolute silence. Antarctica is the harshest, driest, coldest, windiest continent at the bottom of the earth. Treacherous weather yet a land of stunning panoramas, wide sweeping glaciers, turbulent icefalls and vast majestic snow-covered landscapes. In summer, these are seen under a permanent sun that whirls relentlessly along the horizon and in winter continuous darkness obscures everything. Each sunrise and sunset are unique, and colours directly flow from heaven. The colours get reflected from pure white snow and there is a shower of many divine colours all around. Antarctica is a spiritual experience!

Here the sun, moon do not always rise in the east and set in the west. The midnight sun sets for 10 minutes in the south at the beginning of winter here and the Polar night ends when sun rises for the first time in the North. Clouds with ice crystals give multiple images of sun, and cold weather plays tricks giving rise to astonishing mirages- don't be surprised if you happen to see a ship or a piston bulley upside down! It is that part of the planet earth, where humans did not get a chance to interfere with nature. Southern Ocean

encircling this continent freeze in winter resulting in doubling the size of the land mass-A pulsatile continent! Antarctica is cut off from the rest of the world during harsh winter months from March to October. Highest of all the continents, Lowest recorded temperatures (-89 degree) and violent snow storms (winds over 250kmph); it's indeed a unique place on earth!

Its beauty is ethereal... On clear winter nights, there arise southern lights, or Aurora Australis from behind the ice shelf -often rolling waves of green, blue, red like a giant wheel of fairy dust. They are seen undulating over our head and spreading to fill the sky, moving like waves after waves; just like huge curtains spreading down from heaven. It was an emotional, life changing experience that one can only sit on the knees, hands folded, with tears in the eyes!

Since earth's axis is tilted, In the clear sky, on winter nights; very bright Milky Way or Galaxy with millions of stars each shining like diamonds is a common sight in Antarctica! The moon looks the size of our sun here and pure, white pristine snow glitters in silvery moon light.

We have nations getting along well in Antarctica, then they are doing anywhere else in the world! It is worth something to do it this way, whatever we do to keep co-operation, to pursue things that make

us better human beings. That is happening right now on this continent and it is special. People who come to Antarctica are real people like you and me, who do their job and not the people on National Geographic or rich people spending lot of money on the cruise.

I was selected as a only doctor accompanying 36th Indian Scientific Expedition to Antarctica, by Government of India, Ministry of Earth Sciences (National Centre for Antarctic and Ocean Research). I was a member of wintering team, spending a year on ice that changed my life! Maitri, an Indian Research station, was my home for a year and logistic, scientist members were my family!

Maitri- (Winter-) Sun??.....NO- It's MOON!

Summers are busy here, since lot of science happens ...Maitri serves as a base for various research activities like Geological survey, Ozone study, Geomagnetism, glacier melting etc. Logistic members provide support to various scientific activities and maintain research station. Working in harsh weather conditions, logistic members are real brave hearts and heroes of Antarctica. Risking their lives at times, they see to it that the task is accomplished. Supply ship arrives in March, once a year with fuel, ration etc. Backloading of samples, waste material and loading is the most important task of convoys. It is always a race against the time, needs to be completed before the sea freezes!

Winter is the most challenging period, as the continent gets cut off from the rest of the world. No wonder that, to get selected for the expedition, each wintering member has to undergo and pass very strict physical and psychological evaluation in AIIMS. Fitness norms are

¹Anaesthesiologist, in ESIS Hospital.

Address of Correspondence
Dr. Madhubala Chinchalkar Joshi
Anaesthesiologist, in ESIS Hospital

Email: madhubala.chinchalkar@gmail.com



Madhubala Chinchalkar Joshi

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international. With 4 months of total darkness during polar night, challenges as a doctor are unique in Antarctica. Changes in circadian rhythm are observed. Some studies have indicated low Growth Hormone levels during dark winter months. 'Winter effect' was obvious in many members characterised by mood changes, irritability, depression due to isolation, sleep disturbances, loss of appetite, constipation etc. and were observed in many members during our expedition. Unfortunately, After 23rd July, whatever weak internet was available in Maitri got disconnected. Though satellite phone was available, after equinox (21st September) due to Solar



storms, Satellite communication too was next to impossible! As if we were in the space!! Regular fortnightly medical check-up for all the members was a practice in Maitri. Being an Anaesthesiologist, it was my

great pleasure to train my team members in BLS! All members were daily given daily dose of Calcium, Vit D, Vit B complex as well as Vit C during polar night. Being a mental health professional too— frequent Counselling of members, Regular Yoga class,

Gymnasium, an excellent library as well as good Collection of Musical instruments of Maitri helped me in taking care of mental health of my team members. Trauma and cold injuries required treatment too. Foreign body



hand, eye need special mention so is PID (Prolapsed Intervertebral Disc); since logistic members have outdoor activities and heavy manual labour. I had to do an I & D too. Climax of my duty as an expedition doctor was, I had to do medical evacuation of a

28 years old boy, a boiler operator; by 1st flight that resumed after winter to Cape town ICCU. He developed hypertension during winter months (Renal Hypertension?), when the

continent was practically cut off from the civilization. Subsequently, there was pallor, generalised body oedema, severe hypertension, muscle cramps, breathlessness, irregular pulse etc. I had to handle a medical emergency of Renal failure in Antarctica, clinically- for two months without any investigations! Being an anaesthesiologist helped me to manage him till the 1st flight to Antarctica resumed. With the co-operation of Government of India; I transferred him to Cape Town ICCU, when investigations revealed his diagnosis as End Stage Renal Failure (Na 120, K5.9, Cl 90, bicarbonate 10,

Urea 51.3, Sr Creatinine 23 mg%). Tears rolled down from my eyes, when his life was saved in the Cape Town with timely Haemodialysis!

Winter in Antarctica is a challenge and an experience to live. Despite harsh



winter-logistic and scientific team work as one unit to make expedition a grand success. As the sea freezes over, the wild life begins to disappear from around the Schirmacher hills. Baby Polar Skuas are adults now. The temperature drops to -30 to -35 C. Wind speed of 50-60 knots adds up to wind chill sometimes with effective temperature of -50 degrees or

less; tears flow down and the next moment they are frozen on the face. This is an Adelie Penguin, suicidal; since it strayed and travelled inland about 80 km to Priyadarshini lake. It was killed by South Polar Skua. It is heart breaking when you see animals in distress like this.

Because we are not allowed to interfere which are set to let the nature take its course.

AND

May be this is why-----
Antarctica is Heaven- Laws of Nature govern this continent!

Dr.Madhubala Joshi- Chinchalkar.

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